

Discrimination and Depression in Lesbian, Gay, and Bisexual Individuals: The Role of
Emotion Regulation

Research Thesis

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distinction* in Psychology in the undergraduate colleges of The Ohio State University.

by

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Introduction

Across studies, sexual minorities consistently demonstrate higher rates of mental illness compared to their heterosexual peers (Cochran, 2001; Meyer, 2003; Sandfort, de Graaf, Bijl, & Schnabel, 2001). A meta-analysis by Meyer (2003) found that, compared to heterosexual men and women, sexual minorities are about 2.5 times more likely to meet criteria for a mental disorder in their lifetime. Another study by Gilman and colleagues (2001) found that men and women with same-sex partners showed higher rates of suicide attempts and suicidal ideation, than those with opposite-sex partners. It is clear that the lesbian, gay, and bisexual (LGB) community experiences a higher mental health burden than the heterosexual community. It is important to understand why this group might demonstrate these higher rates of disorders in order to provide improved prevention and intervention methods.

One explanation for these increased rates of mental illness in sexual minorities may lay with their experiences of discrimination (Bostwick, Boyd, & Hughes, 2010). By virtue of having a sexual orientation that differs from societal norms, sexual minorities are exposed to a different set of stressors than their heterosexual peers. LGB discrimination can create a stressful social atmosphere where the minority person who does not relate to the norm may feel isolated and experience stress about their identity (Meyer, 2003). Indeed, many mental health disorders show strong connections to the social environment. Meyer's (2003) minority stress model proposes that negative evaluations from others regarding sexual orientation might induce poor psychological outcomes.

Meyer's model has three underlying assumptions: that minority stress is 1) unique, and in addition to general stressors experienced by all people; 2) chronic, and related to stable underlying social and cultural structures; and 3) socially-based, stemming from social processes outside of the individual (Meyer, 2003). Meyer also mentions three types of minority stress relevant specifically to LGB individuals: external processes, internal processes, and expectations of stressful events. External processes include stressful events and conditions in society. Discrimination against sexual orientation is stressful for the individual and has been shown to have negative effects on one's mental health. Internal processes include internalizations of negative societal attitudes toward the LGB community (i.e., internalized homophobia). Research suggests that concealment of one's sexual orientation might be another process important in minority stress for LGB individuals (Pachankis, 2007). Further, the expectation of stressful events by LGB individuals, and the attention that this expectation requires, creates a stressful environment. For example, an LGB individual might be cautious in their interactions with others due to an expectation of rejection or hide their identity out of fear for harm. However, not every sexual minority individual exhibits symptoms of psychopathology. Thus, there must be some individual difference factor that differentiates those who develop psychopathology from those who do not.

One possible explanation might lie with individuals' ability to cope with negative experiences, or to regulate their emotions. More specifically, perhaps using maladaptive emotion regulation strategies leads to or increases the risk for mental illness in sexual minorities. Indeed, difficulties in regulating emotions have been linked with many mental health disorders, including depression (Gross & Munoz, 1995). Gross (1998) defines

emotion regulation as the ways in which individuals influence which emotions they experience, when they have them, and how they experience and express these emotions. Putatively maladaptive emotion regulation strategies, like rumination and worry, have been linked with depression and other negative mental health outcomes (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Rumination occurs when an individual excessively directs their attention to, or perseverates over, events that occurred in the past (Gross, 1998). Ruminating on negative emotions or experiences is characteristic of depression and often leads to increased depressive symptoms (Nolen-Hoeksema, 2000). Studies have shown that individuals with depression have a more difficult time inhibiting negative emotional processing and as a result, tend to ruminate on negative emotional experiences more (Joormann & Gotlib, 2009). Worrying, or perseverating over potential future events or threats, can become harmful and often leads to feelings of anxiety (Gross, 1998). Reappraisal, on the other hand, is typically perceived as an adaptive emotion regulation strategy. Reappraisal can be defined as changing one's thoughts about a situation or event to alter its emotional impact; this strategy can help to decrease negative emotional experiences (Gross, 1998). Decreased use of reappraisal has been associated with higher levels of depressive symptoms (Joormann & Gotlib, 2009).

Despite research evidence that LGB individuals experience much higher rates of mental health issues compared to their heterosexual peers, there has been relatively little research exploring the mechanisms behind this phenomenon. However, a small body of correlational work is beginning to examine the role of emotion regulation in these minority stress processes. Hatzenbuehler, Nolen-Hoeksema, and Dovidio (2009), for example, found that LGB participants ruminated more on days when they were exposed

to stress about their minority identity and that rumination mediated the relationship between this stress and overall psychological distress. Another longitudinal study found that adolescents with same-sex attraction had higher rates of depressive symptoms and ruminated more than their heterosexual peers (Hatzenbuehler, McLaughlin, & Nolen-Hoeksema, 2008). However, few studies have employed experimental methods to investigate the link between emotion regulation strategies and depressive symptoms in sexual minorities.

The current study intends to examine emotion regulation as a potential mechanism behind discrimination and levels of depressive symptoms in an LGB sample. Specifically, we were interested in the types of emotion regulation strategies participants used when presented with a discriminatory stimulus. To investigate this question, participants were randomized to either an experimental manipulation of discrimination or a control condition of LGB-identity affirmation (video clips). To understand which strategies participants used to regulate their emotions after a discriminatory experience, we developed a novel emotion regulation coding system to code open-response text collected directly after the manipulation.

Consistent with research on the link between depression and maladaptive emotion regulation use, we expected that individuals high in depressive symptoms would be more likely to use maladaptive emotion regulation strategies (e.g., rumination, worry) compared to those low in depressive symptoms. In line with minority stress theory, we expected that participants in the discriminatory condition would show higher maladaptive emotion regulation strategy use than those in the affirming condition. Together, we expected that individuals high in depressive symptoms would be more likely than those

low in depressive symptoms to use maladaptive emotion regulation strategies in response to a discriminatory stimulus toward the LGB community.

Method

Participants

Data were collected as part of a larger study investigating sexual orientation self-disclosure. Sexual minority adults (N=169; 34 lesbian, 40 gay, 71 bisexual, and 24 other) were recruited online through Craigslist, Facebook, emails to listservs, and word-of-mouth, to participate in this study. At birth, 53 of these participants were assigned male and 116 were assigned female; at the time of the study, 52 identified as men, 72 as women, 30 as genderqueer, and 15 as some other gender identification. The majority of participants identified as White/Caucasian (86.4%) and between the ages of 18-30 years (79.3%).

Procedure

After consenting to participate in the study, participants completed demographic questions and a survey measuring their level of depressive symptoms (CES-D). Then, they were randomized to watch either a discriminatory or an LGB-affirming video. Participants were given instructions to fully engage with the video. Next, participants completed attention questions about the film clips and a written reflection task intended to express spontaneous sexual orientation self-disclosure. These written reflections were later coded for the use of three emotion regulation strategies: rumination, worry, and reappraisal.

Depression

To measure depressive symptoms, we used the Centers for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). The CES-D is a brief, 20-question self-report scale designed to assess symptoms of depression in the general population. The items are common symptoms associated with depression; they range from 0 “rarely” to 3 “most of the time” for a total possible score of 60. A score of 16 or higher indicates clinically significant levels of depression. The CES-D has been found to have high levels of internal consistency and moderate test-retest reliability over a three to twelve month period (Radloff, 1977).

Film Clips

The film clips used were intended to invoke an emotional response in participants related to their sexual minority identities. As part of the broader study (see Seager, 2016), two-minute videos were created, one discriminatory and one affirming, from a montage of film clips depicting LGB individuals. The film clips were found on YouTube and consisted of scenes from TV shows, movies, news programs, etc.. The discriminatory clip depicted sexual minorities negatively (e.g., homophobic comments by political commentators), while the affirming clip depicted sexual minorities positively (e.g., news clip about marriage equality).

Reflection Task

Participants completed a three-minute written reflection task in which they reflected on their feelings and thoughts toward the film clip they watched. The prompt for this reflection was adapted from Iacovelli and Johnson’s (2012) study on an individual’s sexual orientation self-disclosure in face-to-face versus distant interactions (e.g., online). Questions from the prompt included, “What positive or negative feelings (if any) did you

experience while watching this video” and “Which of your thoughts about the video stand out most to you”. We used these reflections to determine which emotion regulation strategies the participants used immediately after viewing the film clip. To do this, two research assistants coded the reflections for ruminations, worries, and reappraisals as a percentage of the total number of statements in each reflection.

Emotion Regulation Coding

To code for ruminations, worries, and reappraisals, we need a conceptualization for each. We created a novel coding manual using Gross’ (1998) paper to define each of these emotion regulation strategies and added additional standards to make the coding process more straightforward. We defined rumination as focusing one’s attention on previous events in conjunction with current negative emotions (e.g., current sadness while recalling one’s negative experience when they first disclosed their sexual orientation). Worry was defined as a focus on possible future threats (e.g., concern with how one’s family will react when one does eventually disclose their sexual orientation). Finally, reappraisals were defined as an attempt to alter a situation or one’s current thoughts about the situation to change its emotional impact (e.g., feeling upset over the video followed by a reminder that not everyone feels this way).

Two trained research assistants coded every reflection for emotion regulation strategies based on the above guidelines. Any discrepancies were addressed in weekly consensus meetings. After coding for strategies, we counted the number of sentences expressing each of the three emotion regulation strategies in each reflection. We then divided the number of statements containing each emotion regulation strategy type by the

total number of sentences in the reflection so that we had a measure of each strategy as a percentage of the total written reflection.

Data Analytic Strategy

We were interested in whether participant's scores on a depression measure as well as exposure to discrimination would predict emotion regulation strategy use immediately after a discriminatory or affirming stimulus. Thus, we ran regressions predicting emotion regulation strategy use during the reflection task using depression symptoms (measured by the CES-D) and video condition (discriminatory, affirming). Due to the novelty of our research question and the relatively small literature examining the relationship between depression and state-level emotion regulation, we set our alpha level at .10 to run an exploratory analysis on potential effects.

Results

The model predicted rumination use ($F(2, 168) = 2.77, p = .066, R^2 = .032$), and reappraisal use ($F(2, 167) = 2.71, p = .07, R^2 = .020$), but it did not predict worry ($F(2, 168) = 0.37, p = .70, R^2 = .004$). Specifically, participants made on average 3.95% more ruminative statements and 2.52% more reappraisal statements in the discriminatory condition relative to the affirming condition. Depression scores on the CES-D were not significant predictors of state emotion regulation ($ps > .18$).

We ran additional regression analyses to assess whether rumination or reappraisal was more strongly related to depressive symptoms in our sample. We examined rumination and reappraisal as well as the interaction between these two strategies to predict participant scores on the CES-D. State reappraisal predicted CES-D scores among those who viewed the discriminatory video such that those who used more reappraisal

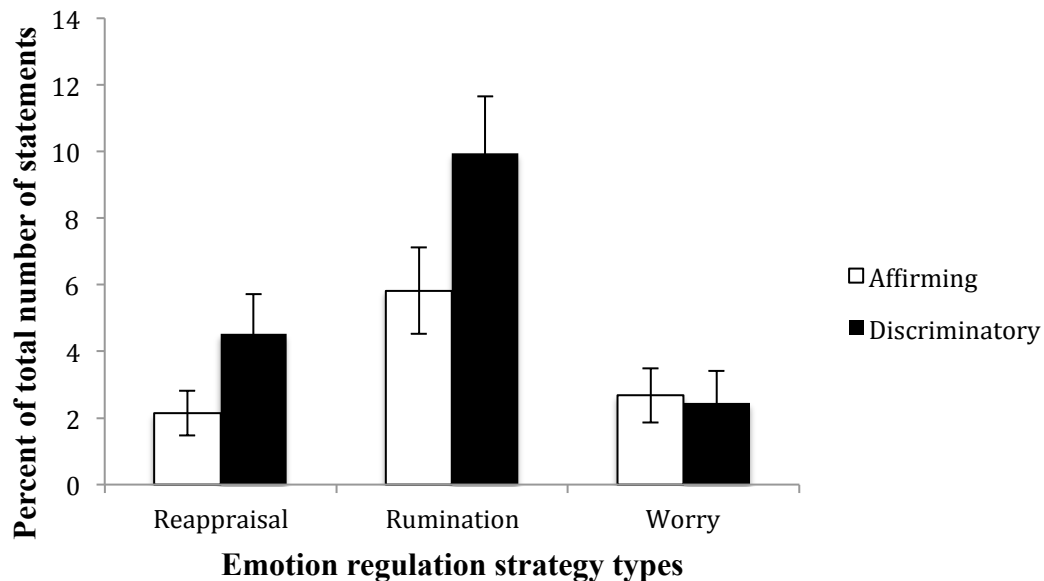
statements in the reflection task tended to have lower scores on the depression measure ($b = -.244$, $t(82) = -1.787$, $p = .078$). State rumination was not a significant predictor of CES-D scores in either the affirming or discriminatory conditions ($b = .148$, $t(84) = 1.338$, $p = .185$ and $b = -.005$, $t(82) = -.045$, $p = .965$, respectively). The interaction between state rumination and state reappraisal was also non-significant (affirming: $b = .082$, $t(84) = 1.409$, $p = .163$; discriminatory: $b = .009$, $t(82) = .658$, $p = .512$).

Table 1

Sample characteristics and emotion regulation strategy usage by number of statements (means and standard deviations)

	Film condition		Total
	Affirming	Discriminatory	
N	85	84	169
CES-D	24.15 (13.85)	25.87 (13.69)	25.01 (13.75)
Reappraisal	.14 (.383)	.46 (1.348)	.30 (1.00)
Rumination	.41 (.791)	.90 (1.774)	.66 (1.389)
Worry	.22 (.643)	.21 (.729)	.22 (.685)

Figure 1. Emotion regulation strategy use by film condition



We were further interested in whether our emotion regulation coding correlated with film condition and participant's CES-D scores. Film condition correlated with both rumination ($r(169) = .147, p = .056$) and reappraisal ($r(169) = .134, p = .083$).

Participant's CES-D scores did not correlate with their emotion regulation usage after viewing the film. Additionally, the three emotion regulation strategies did not significantly correlate with one another.

Table 2

Pearson correlations of depressive symptoms, film condition, and percentage of emotion regulation usage

	1. CES-D	2	3	4
2. Film condition	.063	--		
3. Rumination	.112	.147*	--	
4. Worry	-.065	-.014	.002	--
5. Reappraisal	-.108	.134*	-.118	.119

Note. * significance at a .10 level.

Discussion

In this study, we sought to examine how emotion regulation strategies in response to discrimination or affirmation predict symptoms of psychopathology, specifically depression. We hypothesized that sexual minority individuals with higher scores on a depression measure would be more likely to use maladaptive emotion regulation strategies in response to a discriminatory stimulus, rather than a stimulus affirming their identity. However, these findings suggest that sexual minorities utilize both adaptive (e.g., reappraisal) and maladaptive (e.g., rumination) emotion regulation strategies in response to experiences of discrimination.

Perhaps by targeting participant's minority identity, the discriminatory video elicited more emotions overall, consequently leading to a need for greater emotion

regulation. After experiencing discrimination toward one's identity, one can choose to regulate their emotions in an adaptive or maladaptive manner. Since maladaptive emotion regulation strategies are highly related to poor mental health outcomes, the ideal emotion regulation response would be an adaptive strategy (e.g., reappraisal). This pattern might at least partially explain the mechanism behind discrimination and heightened rates of mental illness in the LGB community.

Additional analyses examining the relationship between reappraisal, rumination, and depression scores in our sample found that those who used more reappraisal statements in response to a discriminatory cue tended to have lower scores on a depression measure. Interestingly, ruminative statements were not a significant predictor for depression scores. This runs in contrast to previous literature linking trait rumination with depression (Nolen-Hoeksema, 2000). These results imply that reappraisal might have a stronger effect on depression scores in sexual minorities than other maladaptive emotion regulation strategies. This suggests that prevention and intervention efforts with sexual minority populations should focus on increasing the ratio of adaptive to maladaptive emotion regulation strategy use in discriminatory contexts.

Limitations and Future Directions

Although our sample includes a wide range of sexual orientations, the largest group is bisexual individuals. Bisexual individuals inhabit a unique position within the LGB community because they experience discrimination from both the heterosexual and the lesbian and gay communities (Mulick & Wright, 2002). Bisexuals also exhibit higher rates of psychopathology than their lesbian and gay peers (Jorm, Korten, Rodgers,

Jacomb, & Christensen, 2002). Therefore it is likely that these results do not adequately represent the full range of LGB responses to discrimination.

Perhaps the largest limiting factor in our study is that the use of the three emotion regulation strategies did not significantly correlate with one another. Previous research has demonstrated that reappraisal is typically negatively associated with depression and rumination is positively associated with depression (Aldao, et al., 2010). Based on this background knowledge, we would expect to find a stronger negative association between rumination and reappraisal than reported above. This leads us to question the reliability and/or validity of our coding measures. It is likely that our coding practices were too stringent and did not include enough of participant's use of emotion regulation. We found that a large portion of our participants did not report any emotion regulation usage based on our coding guidelines. In fact, 84.6% of participants did not have any reappraisal statements in their reflection and 67.5% had no ruminative statements.

Future studies might instead use a prompt that directly asks participants how they regulated their emotions in order to obtain more data, and consequentially more variability, in measures of state-level emotion regulation. Future studies could also build upon this work by adding an additional experimental component — specifically, participants could be instructed or guided to use a particular strategy while being exposed to discrimination or affirmation. Such a manipulation could help inform interventions aimed at reducing LGB individuals' distress and maximizing coping during discriminatory events as well as eliminate the low rates of emotion regulation usage found in our sample.

To measure emotion regulation strategy use after the videos, two research assistants coded participant's written reflections for three strategies (reappraisal, rumination, and worry). There are several other emotion regulation strategies that have also been implicated with depression. We chose to focus on these particular strategies due to an extensive research literature connecting them to mental health (See Gross & Munoz, 1995; Joormann & Gotlib, 2010; Nolen-Hoeksema, 2000; Aldao et al., 2010). Further, these strategies were most appropriate for the study format as they can be expressed in writing. For example, it would be difficult to measure expressive suppression (or, the inhibition of emotional responses) through a written reflection. It is likely that these three strategies do not fully encompass emotion regulation strategy use as it relates to depression. Further research could examine additional emotion regulation strategies (e.g. problem solving, avoidance, suppression) in the context of discrimination by using a relevant study format (e.g. in person).

It might also be interesting to explore how minority stress affects those with multiple versus single minority identities. For example, someone with multiple minority identities might identify as both gay and black, whereas someone with only one identifies as gay but not with any other minority identities. It seems reasonable to assume that those holding many minority identities might respond to discrimination differently than those who identify with a single minority identity. Future studies might explore this additional element by teasing apart participants who identify as only LGB or LGB plus some other minority identity and then examining how these groups regulate their emotions in response to discrimination directed at the LGB community.

Implications

This study provides exciting initial evidence that emotion regulation use during discriminatory events may be tied to depression. Emotion regulation strategy use is highly connected to mental health (Gross & Munoz, 1998; Joormann & Gotlib, 2008; Aldao et al., 2010). Given that the LGB community faces much higher rates of mental illness than the general population, it is important to develop resources and strategies to reduce this immense mental health burden. There appears to be an important link between adaptive emotion regulation strategies and buffering against mental illness in sexual minorities. If sexual minorities utilize both adaptive and maladaptive emotion regulation strategies in response to discrimination, perhaps emotion regulation is one mechanism by which we see increased rates of mental illness in this community. Further, if adaptive state-level emotion regulation strategies show a greater effect on overall depressive symptoms than maladaptive strategies, this could be an avenue for future intervention methods with LGB individuals.

For this reason, intervention and prevention efforts with this population should focus on increasing the ratio of adaptive to maladaptive emotion regulation strategy use in discriminatory contexts, to reduce the immense mental health burden within the LGB community. This could be accomplished by spending more time encouraging the use of adaptive strategies (e.g. reappraisal) in response to LGB-specific discrimination and less time discouraging or attempting to reverse maladaptive strategies (e.g. rumination). Given the high rates of mental illness in the LGB community and research supporting discrimination as a potential explanation for these increased rates, it is important to develop strategies for this population to combat and prevent this burden, especially in discriminatory contexts. Guiding the methods one uses to manage their emotions given

the specific, perceived context (discrimination) might be an important next step in intervention efforts and research on minority stress and mental health in sexual minority populations.

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